DOCUMENT RESUME

ED 196 850 SP 016 891

AUTHOR	Stewart, Deborah M.; And Others
TITLE	Results of IGE Evaluation: Phase I, Report 2.
INSTITUTION	Wisconsin Univ., Madison. Research and Development Center for Individualized Schooling.
SPONS AGENCY	National Inst. of Education (DHEW), Washington, D.C.
REPORT NO	WRDCIS-WP-291
PUB DATE	May 80
GRANT	OB-NIE-G-80-0117
NOTE	66p.
EDRS PRICE	MF01/PC03 Plus Postage.
DESCRIPTORS	Academic Achievement; Comparative Analysis; *Individual Development; Individual Differences; *Individualized Instruction; *Institutional Characteristics; Job Satisfaction; *Program Evaluation; School Organization; Self Concept; Student Attitudes; Teacher Characteristics; *Teaching Methods
IDENTIFIERS	*Individually Guided Education

ABSTRACT

The goal of Individually Guided Education (IGE) is to produce high student achievement in terms of understanding, skills, and action patterns in various curricular areas, and to contribute to the healthy personal, social, ethical, and civic development of each student. A secondary goal is to promote higher job satisfaction in the school teaching staff. This report contains an analysis of data gathered from six IGE schools. The analysis is directed toward determining to what extent IGE has been implemented in the participating schools, and the nature of the relationship of IGE implementation and staff job satisfaction and student outcomes. Statistics are presented on the schoolwide features of IGE schools and staff characteristics. Data are included on features of instructional practices in mathematics and reading in the second and fifth grades, and on staff and student outcomes. Appendices provide detailed information on evaluation score development procedures used for determining schoolwide features of IGE schools and staff characteristics, features of instructional practices, and staff and student outcomes. (JD)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED 196 850

SP 016 991

Working Paper No. 291
part 1 of 2

Results of IGE Evaluation: Phase I

Report 2: Scores and Results of the In-depth Analysis

U.S. DEPARTMENT OF HEALTH
EDUCATION & WELFARE
NATIONAL INSTITUTE OF
EDUCATION

WISCONSIN RESEARCH AND DEVELOPMENT CENTER
FOR INDIVIDUALIZED SCHOOLING
UNIVERSITY OF WISCONSIN · MADISON · SCHOOL OF EDUCATION
1025 W. Johnson Street · Madison, Wisconsin 53706

MISSION STATEMENT

The mission of the Wisconsin Research and Development Center is to improve the quality of education by addressing the full range of issues and problems related to individualized schooling. Teaching, learning, and the problems of individualization are given concurrent attention in the Center's efforts to discover processes and develop strategies and materials for use in the schools. The Center pursues its mission by

- conducting and synthesizing research to clarify the processes of school-age children's learning and development
- conducting and synthesizing research to clarify effective approaches to teaching students basic skills and concepts
- developing and demonstrating improved instructional strategies, processes, and materials for students, teachers, and school administrators
- providing assistance to educators which helps transfer the outcomes of research and development to improved practice in local schools and teacher education institutions

The Wisconsin Research and Development Center is supported with funds from the National Institute of Education and the University of Wisconsin.

WISCONSIN RESEARCH AND DEVELOPMENT
CENTER FOR INDIVIDUALIZED SCHOOLING

WORKING PAPER NO. 291, PART 1 OF 2

RESULTS OF IGE EVALUATION: PHASE I

REPORT 2: SCORES AND RESULTS OF THE IN-DEPTH ANALYSIS

Prepared for General Distribution
Total Sample Results

Adapted by Deborah M. Stewart

Director of IGE Evaluation
Thomas A. Romberg
Professor of Curriculum and Instruction

Wisconsin Research and Development
Center for Individualized Schooling
The University of Wisconsin
1025 West Johnson Street
Madison, Wisconsin 53706

May 1980

NOV 7 1980

This working paper is adapted from Wisconsin R & D Center Technical Reports 475-489 by Gary G. Price, Terence C. Janicki, Judith A. Howard, Deborah M. Stewart, Anne E. Buchanan, and Thomas A. Romberg; 508 and 509 by Gary G. Price Herbert C. Van Deventer, Jr., Terence C. Janicki, and Thomas A. Romberg; and 510-512 by Gary G. Price, Terence C. Janicki, Herbert C. Van Deventer, Jr., and Thomas A. Romberg.

Published by the Wisconsin Research and Development Center for Individualized Schooling. The project presented or reported herein was performed pursuant to a grant from the National Institute of Education, Department of Health, Education, and Welfare. However, the opinions expressed herein do not necessarily reflect the position or policy of the National Institute of Education, and no official endorsement by the National Institute of Education should be inferred.

Center Grant No. OB-NIE-G-80-0117

Table of Contents

PREFACE iv

I. INTRODUCTION 1

II. MEASURED SCHOOL FEATURES: DEFINITIONS AND SCORES 4

GROUP I: Schoolwide Features 4
1--Interorganizational Relations 5
2--Procedures Fostering Coordination and Improvement 6
3--Intraorganizational Structure 7
4--General Implementation of the Instructional Programming Model 8
5--General Staff Background 10
6--Belief in Individual Differences 10
School's Demographic Setting 11

GROUP II: Features of Instructional Practices 12
7--Utilization of Curriculum Resources 12
8--Information Acquisition 13
9--Individualization of Instructional Decisions 15
10--Management of Grouping & Instructional Continuity 16

GROUP III: Staff and Student Outcomes 18
11--Teacher Job Satisfaction 18
12--Student Achievement 18

III. RESULTS OF THE ANALYSIS 20

Interrelationships Among IGE Features 20
Correlates of Teacher Job Satisfaction 21
Correlates of Student Achievement 21

PREFACE

This report is the second and last developed specifically for schools participating in Phase I of the IGE evaluation. It includes both the scores used in the in-depth analysis and the results of that analysis; originally we had planned to provide those in two separate reports.

As you can tell from its name, Phase I is part of a total evaluation activity. The four data-gathering phases described below had different purposes, were carried out in different ways, and obtained different or similar kinds of information at different levels of detail. Schools that participated in Phases II, III, and IV also participated in Phase I. Thus, the four phases are complementary and each is strengthened by the existence of the others.

Phase I provides the base for the entire evaluation activity. Staff questionnaires and student tests and questionnaires were administered in over 150 IGE schools in October 1977. Data analysis was directed toward answering the following questions:

1. To what extent has IGE been implemented in participating schools?

2. What is the relationship of IGE implementation to means of instruction? to staff outcomes? to student outcomes?

A contract was awarded to Research Triangle Institute (RTI) to carry out work related to **Phase II** during spring 1978. RTI is an independent agency whose staff is experienced in conducting educational studies. Thirty of the Phase I schools participated in Phase II. In addition to verifying Phase I results, Phase II dealt with implementation history and cost data and provided more information about the means of instruction variables. Results of Phase II have been reported in R & D Center Technical Report No. 499 by Roderick A. Ironside and Larry Conaway of RTI; excerpts from this report were sent to all Phase I schools in August 1979.

Using a sample of six IGE schools reported to be exemplary in their implementation of the IGE system, **Phase III** studied the extent to which reform and renewal have permeated the day-to-day operations of each school. Results of this phase are described in a book tentatively titled "School Reform and Institutional Life: A Case Study of Individually Guided Education" by Thomas S. Popkewitz, B. Robert Tabachnick, and Gary G. Wehlage.

Details about features of the means of instruction and about their relationship to student achievement are being studied in **Phase IV**. In spring 1978, data were collected to describe the use and effectiveness in IGE schools of the Center's curriculum programs: the Wisconsin Design for Reading Skill Development (Design), Developing Mathematical Processes (DMP), and the PreReading Skills Program. During the 1978-79 school year, the Design and DMP were investigated in IGE and non-IGE schools; in addition, the programs were contrasted with other reading and mathematics programs in IGE schools. Analysis of data from Phase IV is not yet complete. Results will be available in future R & D Center technical reports.

Since the complementary nature of the four phases will not emerge from the discrete sets of reports mentioned above, this task rests finally on **Phase V**. Its purpose is to synthesize the results of Phases I through IV and to interpret those findings in terms of more general issues about schooling. Instead of merely adding together summaries of the different evaluation phases, Phase V will integrate and interpret the data from all the phases into a series of statements about what implications the project has toward contemporary educational issues. By using data from all phases of the evaluation, Phase V will explore several major themes about schooling such as change, stability, and the relationship of organizational issues to learning and to instruction.

I. INTRODUCTION

> From its beginning in 1965-66, the primary aim of IGE has been to produce high student achievement in terms of understandings, skills, and action patterns in the various curricular areas, to improve student abilities that underlie those achievements, and to contribute to the healthy personal, social, ethical, and civic development of each student. ...the following conditions...should be present in IGE schools: clearly defined roles and responsibilities of school personnel, shared decision making by school personnel and others, continuous student progress, personalized instruction, active learning, objective-based evaluation, involvement of parents and support from the community, and support of the responsible education agencies of the state...school staff members should have the chance to enjoy the greater personal satisfaction and self-actualization which comes about through working in IGE schools.[1]

In the above quotation, Klausmeier briefly outlined features of IGE schooling and the anticipated benefits for students and staff. Although the composite information from all four phases of the IGE evaluation will be needed to portray fully the relationships implied in the quote, Phase I has a special role. It is more broadly based than other phases in that information was collected not only from many more schools but also about all aspects of the school's operation and about staff job satisfaction, student achievement in reading and mathematics, student cognitive abilities, and student attitudes; Phase II, Phase III, and Phase IV focused on particular aspects of IGE schooling in fewer schools. (Since almost all of the schools in other phases also participated in Phase I, the total information gathered will be complementary.)

A direct comparison of IGE schools with other kinds of schools is not part of Phase I. Such a comparison would be

[1] Klausmeier, H. J., Kargas, M. L., & Krupa, W. E. Outcomes of IGE and performance objectives for implementation. In H. J. Klausmeier, R. A. Rossmiller, & M. Saily (Eds.), **Individually guided elementary education concepts and practices.** New York: Academic Press, 1977, pp. 333-334.

inappropriate because of the various levels of IGE implementation in schools that have adopted the label IGE; it might also be impossible because of the difficulty in defining a school that is not IGE or in identifying schools that practice **none** of the IGE concepts. In other words, forming two distinct groups--IGE schools and non-IGE schools--is very difficult, if at all possible; therefore the direct comparison was not attempted. The procedure used in Phase I is called structural equations analysis; it is based on a model or description of the relationships among features of schools. This analysis procedure permits a comparison between the **expected** relationship among school features and the relationships that **actually exist** among those features in 156 IGE schools. The Phase I model assumes that higher scores on one feature, for example the way in which staff and students are organized, will lead to higher scores on another feature, for example how thoroughly the IGE Instructional Programming Model is implemented; that is, having a higher score on one feature is assumed to **cause** an increase in the score on the other. To use the example above, in the Phase I model the more the actual school organization reflects the organizational concepts of IGE, the more schoolwide instructional practices are expected to reflect the instructional concepts of IGE.

In Phase I, a model was developed to describe the relationship of various school features to staff job satisfaction, to student attitudes toward self and school, and to student cognitive abilities and achievement in reading and mathematics. The model is diagrammed on the enclosed card and is briefly described below. It may be useful to refer to the model as you read the following description.

Student achievement in reading and mathematics is influenced by individual aptitude and by the instruction provided--appropriateness, kind of materials, group size, and so on. The instruction provided by unit staff is the product of an interrelated set of activites and decisions. These activities are influenced by one another, as implied by **interrelated**, as well as by instructional practices in the school as a whole. These instructional practices also influence job satisfaction of the school staff. Schoolwide instructional practices are in turn influenced by staff characteristics--belief in individual differences, training and experience--and by other characteristics of the school as

a whole--relationships with other educational agencies, organization of staff and students, the school's program of home-school-community relations, research and development activities, and such features as the role of aides, staffing of the IMC, and the staff development program. These schoolwide characteristics are themselves interrelated and influence one another. Thus, schoolwide characteristics directly influence staff job satisfaction but only indirectly influence the achievement of particular groups of students through the activities and decisions of the instructional staff working with those students.

Each of these statements of influence is considered an assumption that was tested statistically. This testing was the purpose of the in-depth analysis of Phase I results which is reported in section III of this document. In section II, a definition is given for each of the features shown in the model and scores are given for all 156 schools and for your own school.

II. MEASURED SCHOOL FEATURES: DEFINITIONS AND SCORES

Three categories of school features have been identified for the Phase I model. In the first category (items 1-6 in the diagram) are schoolwide aspects of IGE schools and characteristics of the staff. The second category (items 7-10 in the diagram) includes instructional practices specific to each of the grade 2 and grade 5 staff groups working with children who were tested. In the third category (items 11-12) are staff and student outcomes--job satisfaction, attitudes, achievement--for which you received preliminary scores in the previous report.

Each of the features in the first two categories was developed from staff responses to more than one questionnaire: staff responses to the IGE Implementation Survey contribute to features 1, 2, and 4; feature 2 also includes some responses to Staff Background Information, Role of the Staff Teacher, I & R Unit Structure and Function, IIC Structure and Function, and the IGE Schools Questionaire. Details about the composition of each feature are provided in Appendix A for Schoolwide Features, Appendix B for Features of Instructional Practices, and Appendix C for Student and Staff Outcomes.

In the definitions in this section, only one of two or more related terms is used. In the list below, the first term in each group is the one used in this document; other terms in each group may be more familiar to some readers.

I & R Unit--Learning Community, team
Unit Leader--Learning Community Leader, team leader
Instructional Improvement Committee (IIC)--Program Improvement Committee (PIC)
Instructional Programming Model (IPM)--Learning Cycle plus steps for schoolwide statements of instructional objectives and for program evaluation

GROUP I: Schoolwide Features of IGE Schools and Staff Characteristics

Six schoolwide composite scores were calculated for each school, representing features 1-6, on the left side of the

model. Four scores describe the school's organization, operation, and ongoing program. Two of the scores--one for experience and one for beliefs--were developed from staff members' reports about themselves.

We consider these to be general school-wide scores for two reasons. First, the questionaire items used were nearly always answered by all members of the groups assessed or were answered only once for the whole school by the pricipal or IIC. Thus, a single score was obtained that is representative of the school. Second, the kind of information that contributes to these scores is generally descriptive of the entire school population or operation rather than specific to a subgroup such as one of the units/teams in which children were tested.

1--Interorganizational Relations
is a measure of the school's IGE-related affiliations and activities with persons and organizations outside the school among various agencies concerned with education in the district, the community, and the state. The interactions included are likely to contribute to the implementation, maintenance, and refinement of IGE in the school. Three IGE components are represented: the districtwide aspects of Multiunit Organizational-Administrative Arrangements, as in the systemwide program committee; Facilitative Environments external to the school, such as participation in a league or state network; and formal aspects of the school's Home-School-Community Relations program.

Three subscores--district, state, and community--were derived. These subscores, a composite of state and community subscores, and a composite of all three subscores are shown below for all 156 schools and for your own school. For schools in one-school districts or in districts with no other elementary school, the district subscore has little meaning: it is for these schools that we have included a composite based on state and community subscores only; this composite is based on state and community scores from all 156 schools.

	DISTRICT		STATE		COMMUNITY	
	SCORE	%	SCORE	%	SCORE	%
Maximum	13.00	100.0	17.00	100.0	12.00	100.0
Highest score	13.00	100.0	13.76	80.9	11.73	97.7
Average	4.61	35.4	6.47	38.1	6.15	51.2
Lowest score	0.45	3.5	1.18	6.9	2.00	16.7
Minimum	0.00	0.0	0.00	0.0	0.00	0.0

General Distribution

No specific school results

	COMPOSITES			
	STATE-COMMUNITY		DIST-ST-COMM	
	SCORE	%	SCORE	%
Maximum	29.00	100.0	42.00	100.0
Highest score	25.13	86.7	38.35	91.3
Average	12.62	42.1	17.22	41.0
Lowest score	3.53	12.2	4.20	10.0
Minimum	0.00	0.0	0.00	0.0

General Distribution

No specific school results

2--Procedures Fostering Coordination and Improvement of the School Program is a measure of procedures and practices within the school that promote continuity and refinement of the overall school program. Features directly and indirectly related to instruction are included such as stability of leadership in the IIC and in the units; use of human and material resources of the community (volunteers, facilities, etc.); advisory or counseling interactions between teachers and students; operation and staff of the Instructional Materials Center (IMC) or a similar facility; and staff development opportunities. Four IGE components are represented: Curricular Programs and Materials, Home-School-Community Relations, Facilitative Environments, and Research & Development.

The total score is the sum of three subscores: Home-School-Community Relations (HSC REL), Facilitative

Environments (FAC ENV), and Reseach and Development (R&D). Results from 156 schools and your school are shown in the table below.

	HSC REL	FAC ENV	R&D	TOTAL
Maximum	36.00	60.00	8.00	104.00
Highest score	33.55	42.55	7.59	83.68
Average	23.68	29.32	3.91	56.91
Lowest score	6.93	10.50	0.63	19.00
Minimum	0.00	0.00	0.00	0.00

General Distribution

No specific school results

3--Intraorganizational Structure

is a measure of the school's internal organization and of the mechanics of its functioning. Scores indicate the proportion of instructional staff assigned to units/teams, the extent to which students are organized into multiaged instructional units, amount of time used for regular unit meetings of appropriate staff, amount of time for and frequency of regular IIC meetings of appropriate staff, and records kept of IIC decisions. IGE components represented are within-school aspects of Multiunit Organizational-Administrative Arrangements and the meetings aspect of Facilitative Environments.

Total scores for Intraorganizational Structure were developed so that about half of the total would result from unit membership scores, about 30% from unit meetings scores, and about 20% from IIC meetings scores. The formula used to derive the total score is given in Appendix A. The original points for subscores are reported below for 156 schools and your own school along with the final points for total score.

	UNIT MEMBERSHIP		
	STAFF	STUD	TOTAL
Maximum	18.00	12.00	30.00
Highest score	16.03	12.00	27.07
Average	12.54	8.90	21.44
Lowest score	4.04	3.00	9.79
Minimum	0.00	3.00	3.00

General Distribution

No specific school results

	UNIT MEET	IIC MEET	TOTAL SCORE
Maximum	26.00	30.00	31.44
Highest score	22.50	30.00	26.41
Average	14.92	19.12	20.52
Lowest score	0.00	0.00	8.09
Minimum	0.00	0.00	1.50

General Distribution

No specific school results

4--General Implementation of the Instructional Programming Model is a measure of the extent to which the Instructional Programming Model (IPM) is followed across staff and students and across curriculum areas. Each of the seven steps of the IPM is covered:

(1) setting schoolwide instructional objectives and details of IIC instructional support,
(2) selecting a subset of objectives for children in each unit,
(3) keeping and using records of assessment results,
(4) setting specific short-term objectives,
(5) providing instruction,
(6) assessing after instruction,
(7) evaluating results for each student and for the total program.

Each subject for which this pattern is followed, in the whole school or in separate units, is termed an IGE subject. An additional element of schoolwide use of the IPM includes number of IGE subjects in the school, use of a formal program of motivational procedures, and proportion of IIC time devoted to assistance in instructional programming. The three IGE components represented are Instructional Programming for the Individual Student, Curricular Programs and Materials, and Evaluation for Decision Making.

In the table below, results for all 156 schools and your school are shown. There are separate scores for each of the seven IPM steps and for the eighth element described above. Score names are abbreviated as follows:

IIC schoolwide objectives and IIC instructional support
SEL selecting objectives in unit
RECS record keeping
OBJ setting short-term objectives
INSTR providing instruction
ASSNG assessing after instruction
EVAL evaluating results
MISC IGE subjects, motivational procedures, IIC time
TOTAL sum of the eight subscores

	IIC	SEL	RECS	OJB	INSTR
Maximum	6.00	18.00	18.00	13.00	13.00
Highest score	5.87	17.88	17.59	12.85	12.75
Average	3.13	13.15	11.23	8.96	8.92
Lowest score	0.00	1.77	2.42	1.97	3.21
Minimum	0.00	0.00	0.00	0.00	0.00

General Distribution
No specific school results

	ASSNG	EVAL	MISC	TOTAL
Maximum	13.00	6.00	13.00	100.00
Highest score	12.78	5.46	12.07	93.45
Average	8.36	3.32	5.39	62.44
Lowest score	1.68	1.05	0.00	16.58
Minimum	0.00	0.00	0.00	0.00

General Distribution
No specific school results

5--General Staff Background
is primarily a measure of the experience of school staff members, both overall experience in education and experience in IGE specifically, including instructing at an IGE workshop. In addition, level of professional preparation, experience in the district, and experience in the school are included.

Results from all schools and your school are shown below.

Maximum	7.00
Highest score	5.02
Average	3.84
Lowest score	1.88
Minimum	0.00

General Distribution

No school

6--Belief in Individual Differences
is a measure of the extent to which staff members believe (a) that students differ and have individual needs (both intellectually and in personality characteristics) and (b) that these differences should be considered in planning and implementing the instructional program.

Results are shown below for all 156 schools and for your school.

Maximum	4.00
Highest score	3.67
Average	3.16
Lowest score	2.56
Minimum	0.00

General Distribution

No school

School's Demographic Setting is a descriptor of the student population. The seven categories of size and type of community are those used in reporting results of the National Assessment of Educational Progress (NAEP). We used order from farthest below to farthest above median to estimate the effects of school demography. Our reference group was 9-year-olds, the youngest group in NAEP testing and the group closest to Phase I's second and fifth graders.

In the first school report, we summarized reports from all 157 schools responding. Reports summarized in the table below are from the 156 schools in the in-depth Phase I analysis.

CATEGORY	NUMBER OF SCHOOLS	ORDER SCORE
High metro	4	7
Low metro	8	1
Urban fringe	25	6
Main big city	8	3
Medium city	35	5
Small place	51	4
Extreme rural	25	2
General Distribution		No school

GROUP II: Features of Instructional Practices at the Unit Level

For each of the four features in the group (items 7-10 in the diagram), separate scores were calculated for two curriculum areas (reading and mathematics) and for two staff groups (staff working with the grade 2 children who were tested and those working with the grade 5 children who were tested). These features describe the instructional practices employed and thus represent more detailed information about the IGE components of Instructional Programming for the Individual Student, Curricular Programs and Materials, and Evaluation for Decision Making. The term **unit** is used to refer to each of the staff groups, whether reports were provided by staff of a unit, team, or learning community or by teachers in self-contained classrooms.

7--Utilization of Curriculum Resources is a measure of two components of instruction: schoolwide instructional objectives and curricular materials in use. The schoolwide instructional objectives element includes not only whether objectives were adapted from a published curriculum or set by other means but also whether the curriculum is one known to be compatible with the Instructional Programming Model (that is, one developed by the R & D Center). Materials in use includes reading-writing materials, audiovisual materials, manipulatives, and no media situations; both the number of kinds of each type of material and the proportion of time each type is used are considered in this element.

Scores are given for all 156 schools and for your school, separately for the grade 2 and grade 5 units as well as for both reading and mathematics.

READING

	GRADE 2			GRADE 5		
	OBJEC	MATLS	TOTAL	OBJEC	MATLS	TOTAL
Maximum	30.00	30.00	60.00	30.00	30.00	60.00
Highest score	30.00	30.00	60.00	30.00	30.00	60.00
Average	15.38	27.15	44.85	15.73	27.25	44.77
Lowest score	0.00	18.34	22.00	0.00	16.25	19.91
Minimum	0.00	0.00	0.00	0.00	0.00	0.00

General Distribution

No specific school results

MATHEMATICS

	GRADE 2			GRADE 5		
	OBJEC	MATLS	TOTAL	OBJEC	MATLS	TOTAL
Maximum	30.00	30.00	60.00	30.00	30.00	60.00
Highest score	30.00	30.00	60.00	30.00	30.00	60.00
Average	13.65	25.62	39.53	13.59	26.24	40.15
Lowest score	0.00	11.94	11.94	0.00	12.00	12.00
Minimum	0.00	0.00	0.00	0.00	0.00	0.00

General Distribution

No specific school results

8--Information Acquisition

is a measure of how the unit gathers information for making decisions about the instruction of the individual student. Three elements are included: whether the unit keeps individual records of skill and concept attainment in the curriculum area, the number of types of assessments used in assessing skills and concepts, and the extent to which other learner characteristics are assessed.

Results are reported separately for reading and mathematics for the grade 2 and grade 5 units in all 156 schools and in your school.

READING

GRADE 2

	SKILLS RECS	ASSMT	OTHER	TOTAL
Maximum	3.00	3.00	2.00	8.00
Highest score	3.00	3.00	2.00	8.00
Average	2.28	2.74	1.97	7.01
Lowest score	0.00	1.67	1.00	4.00
Minimum	0.00	1.00	0.00	1.00

General Distribution

No specific school results

GRADE 5

	SKILLS RECS	ASSMT	OTHER	TOTAL
Maximum	3.00	3.00	2.00	8.00
Highest score	3.00	3.00	2.00	8.00
Average	2.15	2.79	1.98	6.93
Lowest score	0.00	2.00	1.46	4.50
Minimum	0.00	1.00	0.00	1.00

General Distribution

No specific school results

MATHEMATICS

GRADE 2

	SKILLS RECS	ASSMT	OTHER	TOTAL
Maximum	3.00	3.00	2.00	8.00
Highest score	3.00	3.00	2.00	8.00
Average	2.37	2.83	1.94	7.18
Lowest score	0.00	1.00	0.00	4.00
Minimum	0.00	1.00	0.00	1.00

General Distribution

No specific school results

GRADE 5

	SKILLS			
	RECS	ASSMT	OTHER	TOTAL
Maximum	3.00	3.00	2.00	8.00
Highest score	3.00	3.00	2.00	8.00
Average	2.54	2.86	1.95	7.39
Lowest score	0.00	1.00	1.00	3.00
Minimum	0.00	1.00	0.00	1.00

General Distribution
No specific school results

9--Individualization of Instructional Decisions is a measure of the extent to which conditions exist in the unit under which differences among students could affect decisions about instruction. One element is about unit meetings: whether they occur and, if so, the relative emphasis during unit meetings on various topics such as instructional planning, managerial arrangements, evaluation, inservice and preparation. This meetings element is identical for reading and mathematics. The other element is about conditions of instruction: frequency of regrouping, whether minimum requirements are used, and the extent to which different rates of progress are possible for different learners.

Results are shown below separately for reading and mathematics within the grade 2 unit and the grade 5 unit.

GRADE 2		**CONDITIONS**		**TOTALS**	
	MEETINGS	RDNG	MATH	RDNG	MATH
Maximum	5.00	9.00	9.00	14.00	14.00
Highest score	5.00	9.00	9.00	13.00	14.00
Average	2.96	5.20	5.33	8.16	8.33
Lowest score	0.00	2.25	1.00	2.33	1.00
Minimum	0.00	0.00	0.00	0.00	0.00

General Distribution
No specific school results

GRADE 5		CONDITIONS		TOTALS	
	MEETINGS	RDNG	MATH	RDNG	MATH
Maximum	5.00	9.00	9.00	14.00	14.00
Highest score	5.00	9.00	9.00	13.00	14.00
Average	2.70	4.81	5.38	7.51	8.09
Lowest score	0.00	1.50	1.00	1.50	1.00
Minimum	0.00	0.00	0.00	0.00	0.00

General Distribution
No specific school results

10--Management of Grouping & Instructional Continuity is a measure of the organization of the instructional environment. It includes six features:

proportion of time various group sizes are used (GRPS),
the extent to which regrouping provides groups of changing composition (RGRP),
presumed learner perceptions of a sequence of objectives (SEQ),
presumed learner perceptions of the interrelationship of objectives (INT),
the maximum number of objectives that can be attained annually (OBJ), and
instructional interruptions whether part of the schedule or not (CON).

Results are given below separately for the two subject areas and two grade levels for all schools and for your school.

GRADE 2 READING

	GRPS	RGRP	SEQ	INT	OBJ	CON	TOTAL
Maximum	12.00	12.00	4.00	4.00	8.00	8.00	48.00
Highest score	12.00	12.00	4.00	4.00	8.00	8.00	45.00
Average	7.17	2.46	3.51	3.61	4.65	7.20	28.64
Lowest score	0.00	0.00	0.00	0.00	0.00	3.67	13.67
Minimum	0.00	0.00	0.00	0.00	0.00	0.00	0.00

General Distribution
No specific school results

GRADE 2 MATHEMATICS

	GRPS	RGRP	SEQ	INT	OBJ	CON	TOTAL
Maximum	12.00	12.00	4.00	4.00	8.00	8.00	48.00
Highest score	12.00	12.00	4.00	4.00	8.00	8.00	45.75
Average	6.71	2.39	3.70	3.66	5.28	7.69	29.51
Lowest score	0.00	0.00	0.00	0.00	0.00	4.00	14.00
Minimum	0.00	0.00	0.00	0.00	0.00	0.00	0.00

General Distribution

No specific school results

GRADE 5 READING

	GRPS	RGRP	SEQ	INT	OBJ	CON	TOTAL
Maximum	12.00	12.00	4.00	4.00	8.00	8.00	48.00
Highest score	12.00	12.00	4.00	4.00	8.00	8.00	42.88
Average	6.30	2.00	2.84	3.00	4.80	7.29	26.34
Lowest score	1.88	0.00	0.00	0.00	0.00	2.00	11.00
Minimum	0.00	0.00	0.00	0.00	0.00	0.00	0.00

General Distribution

No specific school results

GRADE 5 MATHEMATICS

	GRPS	RGRP	SEQ	INT	OBJ	CON	TOTAL
Maximum	12.00	12.00	4.00	4.00	8.00	8.00	48.00
Highest score	12.00	12.00	4.00	4.00	8.00	8.00	45.00
Average	6.20	3.00	3.45	3.26	4.82	7.68	28.54
Lowest score	0.00	0.00	0.00	0.00	0.00	4.00	12.00
Minimum	0.00	0.00	0.00	0.00	0.00	0.00	0.00

General Distribution

No specific school results

GROUP III: Staff and Student Outcomes

Five outcome measures are reported here. Job satisfaction is the staff outcome measure. Achievement in reading and in mathematics at both grades 2 and 5 is reported for students.

11--Teacher Job Satisfaction
is a measure of the overall level of satisfaction developed from reports of all staff members of the school. Reports in the table below are from 156 schools.

Maximum	50.00
Highest score	50.00
Average	40.57
Lowest score	24.60
Minimum	0.00

General Distribution
No specific school results

12--Student Achievement
is reported as difference scores, relating raw scores obtained on the Comprehensive Tests of Basic Skills (CTBS) and predicted scores. Difference scores of approximately zero would occur if, on the average, children's obtained scores nearly equalled their predicted scores. Negative difference scores indicate obtained scores lower than predicted scores; positive difference scores indicate scores obtained were higher than predicted.

Predicted scores were developed separately for each CTBS subtest using results from all children taking the particular test. The prediction is based on the relationship among academic aptitude, as measured by the Short Form Test of Academic Aptitude, the child's sex, and CTBS raw score. Total scores for reading and mathematics were developed by summing scores on the subtests. Results are reported below for all schools combined and for your school.

READING

GRADE 2

		COMPREHENSION		
	Vocab	Sent	Pass	Total
Highest score	6.521	5.547	5.645	12.402
Average	- .168	- .152	- .121	- .454
Lowest score	-9.521	-8.081	-5.244	-18.909

General Distribution

No specific school results

GRADE 5

	Vocab	Compr	Total
Highest score	4.671	6.348	7.627
Average	- .137	- .117	- .260
Lowest score	-9.172	-10.685	-19.857

General Distribution

No specific school results

MATHEMATICS

GRADE 2

	Comp	Conc & Appl	Total
Highest score	10.286	3.647	7.627
Average	- .121	- .041	- .260
Lowest score	-7.355	-6.323	-19.857

General Distribution

No specific school results

GRADE 5

	Comp	Conc	Appl	Total
Highest score	11.547	3.072	4.229	14.019
Average	- .009	- .011	- .044	- .097
Lowest score	-8.993	-3.963	-6.075	-11.823

General Distribution

No specific school results

III. RESULTS OF THE ANALYSIS

The analysis procedure, as described in Section I, was based on a description of the relationships among features of schools and permitted a comparison between the expected relationships and those that actually exist. The model described in that section and diagrammed on the enclosed card allows discussion of three kinds of results. First, the relationships among implementation of the various measured IGE features is described. Second, the relation between IGE features and staff job satisfaction is discussed. Third, the relation between IGE features and student achievement in reading and mathematics is considered.

This section is primarily adapted from Wisconsin R & D Center Technical Reports 510, 511, and 512 by Gary G. Price, Terence C. Janicki, Herbert C. VanDeventer, Jr., and Thomas A. Romberg. Statistically oriented readers are referred to those documents for additional information.

Interrelationships Among IGE Features

Among the IGE schools participating in the evaluation, the level of implementation of measured IGE features is fairly consistent within each school. That is, schools with high scores on Interorganizational Relations are likely to have high scores on Intraorganizational Structure, Procedures Fostering Coordination and Improvement of the School Program, and General Implementation of the Instructional Programming Model (IPM). Schools with low scores on one of these features tend to have low scores on the others. Correlations among these features range from .46 to .73. We had predicted that the level of implementation of these features would be closely linked. This prediction is shown by the curved arrows at the left of the model and the arrows from three of the features to IPM implementation.

Demographic Setting, which had been ranked to reflect differences in student achievement found in nationwide studies, was not related to level of IGE implementation. Correlations ranged from .04 between Demographic Setting and Intraorganizational Structure to .13 between Demographic

Setting and Interorganizational Relations. Level of IGE implementation, thus, varies about as much among schools of each demographic type as it does among all schools.

Correlates of Teacher Job Satisfaction

Staff of participating schools seem to derive satisfaction with their work from two primary sources. First, not surprisingly, is the belief that they are providing students with an effective educational program. This effect was identified in the correlations of Belief in Individual Differences and General Implementation of the Instructional Programming Model with Job Satisfaction. Second, the stronger source is the satisfaction gained from associations with other educators and a sense of participation in a larger movement. This effect appeared in the correlations of Job Satisfaction with Interorganizational Relations and with Procedures Fostering Coordination and Improvement of the School Program.

Neither General Staff Background nor school's Demographic Setting was more than trivially related to Job Satisfaction, with correlations of .05 and .03 respectively. The influences on Job Satisfaction mentioned here seem to apply to teachers of varying experience and teachers in different demographic settings.

Correlates of Student Achievement

In the model, we hypothesized that features of instructional practices in the grade 2 and grade 5 units would affect student achievement in reading and mathematics. That hypothesis was not supported. Comments about the finding are given below.

Structural equations analysis is a test for linear relationships, that is, the extent to which an increase (or decrease) in one score predicts an increase or decrease in another. It is possible that some relationships are nonlinear. A familiar nonlinear relationship is that between heat under the pan and temperature of water in the pan. Increases in heat under a pan increase the water temperature only to a certain point; once the water has reached boiling,

it will get no hotter. Similarly, increases in temperature up to 32 F have no readily observable effect on ice; increases beyond that temperature turn the solid into water. Tests for nonlinear relationships among the Phase I scores could be made.

Phase I testing was carried out in the second month of the school year. Thus, in many schools, students had had only a few weeks exposure to the instructional practices reported by staff. Little relationship was found between instructional practices and achievement. This finding may be in part due to the lack of time for those practices to have an effect or to other reasons, some of which are discussed below.

As was discussed in the Preface, the four phases of the evaluation together strengthen and lend validity to one another. The investigation of the assessment and function of instructional practices is a prime example of the interrelationship among the phases. To the survey data obtained in Phase I, we can add the on-site validation and extension of findings in the 30 Phase II schools. A further addition comes from Phase IV; reading and mathematics instruction in 19 schools was observed over the entire school year and student achievement was monitored eight times during that year. From Phase III we can add descriptions of instruction from a different perspective. This investigation would consider whether the appropriate instructional variables were assessed in Phase I and how accurate the survey assessment was.

The extent to which the standardized achievement tests used in Phase I were about equal in validity for all schools must also be considered. From Phase II we have information about the relative validity of the Phase I achievement tests. Staff were asked to rate the match of test content and their curriculum content on a 5-point scale. At grade 2 the content match was reported to be 4 or 5 on the scale in over one-third of the schools; at grade 5 the match was reported to be that good in two-thirds or more of the schools. In Phase IV, the content of the achievement monitoring tests was directly related to the curriculum in use in some schools; we will have information about the relationship of differences in scores to differences in content emphasis, although the

Phase I standardized achievement tests and Phase IV achievement monitoring tests are different in nature.

This finding of Phase I may be clarified or extended by examining results from the other phases, and Phase I results may contribute to the findings of other phases. Phase V, a synthesis and integration of results from all phases, is the task to be accomplished in the year ahead.

Working Paper No. 291
part 2 of 2

Results of IGE Evaluation: Phase I

Report 2 Appendices: Score Development Procedures

WISCONSIN RESEARCH AND DEVELOPMENT CENTER
FOR INDIVIDUALIZED SCHOOLING
UNIVERSITY OF WISCONSIN-MADISON SCHOOL OF EDUCATION
1025 W Johnson Street, Madison, Wisconsin 53706

MISSION STATEMENT

The mission of the Wisconsin Research and Development Center is to improve the quality of education by addressing the full range of issues and problems related to individualized schooling. Teaching, learning, and the problems of individualization are given concurrent attention in the Center's efforts to discover processes and develop strategies and materials for use in the schools. The Center pursues its mission by

- conducting and synthesizing research to clarify the processes of school-age children's learning and development
- conducting and synthesizing research to clarify effective approaches to teaching students basic skills and concepts
- developing and demonstrating improved instructional strategies, processes, and materials for students, teachers, and school administrators
- providing assistance to educators which helps transfer the outcomes of research and development to improved practice in local schools and teacher education institutions

The Wisconsin Research and Development Center is supported with funds from the National Institute of Education and the University of Wisconsin.

WISCONSIN RESEARCH AND DEVELOPMENT
CENTER FOR INDIVIDUALIZED SCHOOLING

WORKING PAPER NO. 291, PART 2 OF 2

RESULTS OF IGE EVALUATION: PHASE I

REPORT 2 APPENDICES:

SCORE DEVELOPMENT PROCEDURES

Adapted by Deborah M. Stewart

Director of IGE Evaluation
Thomas A. Romberg
Professor of Curriculum and Instruction

Wisconsin Research and Development
Center for Individualized Schooling
The University of Wisconsin
1025 West Johnson Street
Madison, Wisconsin 53706

May 1980

NOV 7 1980

Published by the Wisconsin Research and Development Center for Individualized Schooling. The project presented or reported herein was performed pursuant to a grant from the National Institute of Education, Department of Health, Education, and Welfare. However, the opinions expressed herein do not necessarily reflect the position or policy of the National Institute of Education, and no official endorsement by the National Institute of Education should be inferred.

Center Grant No. OB-NIE-G-80-0117

Table of Contents

INTRODUCTION.....

APPENDIX A.....1

1--INTERORGANIZATIONAL RELATIONS (IOR).....2

2--PROCEDURES FOSTERING COORDINATION.....4

3--INTRA-ORGANIZATIONAL STRUCTURE.....7

4--GENERAL IMPLEMENTATION.....12

5--GENERAL STAFF BACKGROUND.....15

6--BELIEF IN INDIVIDUAL DIFFERENCES.....16

SCHOOL'S DEMOGRAPHIC SETTING.....16

APPENDIX B.....18

NOTE ON SCORE DEVELOPMENT.....19

7--UTILIZATION OF CURRICULUM RESOURCES.....20

8--INFORMATION ACQUISITION.....22

9--INDIVIDUALIZATION OF INSTRUCTIONAL DECISIONS.....23

10--MANAGEMENT OF GROUPING & INSTRUCTIONAL CONTINUI.25

APPENDIX C.....27

11--TEACHER JOB SATISFACTION.....28

12--GRADES 2 AND 5 ACHIEVEMENT SCORES.....28

INTRODUCTION

This section of the report is intended for the reader interested in more detail than is provided in the body of the report about score development.

The reader wishing to reconstruct the variables is referred to the Wisconsin R & D Center reports from which this section was adapted: Technical Reports 475-489, by Gary G. Price, Terence C. Janicki, Judith A. Howard, Deborah M. Stewart, Anne E. Buchanan, and Thomas A. Romberg; Technical Reports 508 and 509 by Gary G. Price, Herbert Van Deventer, Terence C. Janicki, and Thomas A. Romberg.

APPENDIX A

Score Development Procedures

for

Schoolwide Features of IGE Schools

and

Staff Characteristics

(Items 1-6 on diagram

plus demographic setting)

1--INTERORGANIZATIONAL RELATIONS (IOR)

The composite interorganizational relations score is a sum of scores for external relationships at three levels: within the school district as evidenced by the Systemwide Program committee (SPC), within the community, and within the state among various agencies concerned with education: intermediate agencies, teacher education institutions, the state education agency, regional and statewide IGE groups.

Scores were developed from the principal's response to items on the IGE Schools Questionnaire (SCHOOLS, buff paper) and from responses of all school staff to items in the IGE Implementation Survey (IMPL, pp. 7-12 in General Staff Questionnaires booklet, blue cover). The 0-4 scale that staff used in responding to Implementation Survey items was generally used to provide the IOR score.

District subscore--Both staff perceptions and the principal's report of frequency of meeting were included in the subscore.

Staff responses on a 0-4 scale about effective SPC functioning (IMPL item 36) and about the principal's linking role between the school and the SPC (IMPL item 40) were added for up to 8 points. The principal's report about frequency of SPC meetings (SCHOOLS item III A3) was scored on a 0-5 scale with more frequent meetings receiving higher scores and 0 indicating no meetings reported. Staff and principal responses were added for an intitial score which ranged from 0 to 13. A score of zero was assigned if either part was reported to be zero; that is, if staff rated the SPC as not implemented or if the principal reported no SPC meetings, no points were assigned.

Staff reports on five other items were considered of possible importance to this score. Four items related to SPC operations and one item related to local staff development opportunities. Only two of these additional items--SPC composition (IMPL item 37) and position of SPC chairman (IMPL item 39)--provided additional information in the sense of changing schools' scores. Therefore, a

proportion of the score obtained from staff responses to these two items was combined with a proportion of the initial district relations score; by this procedure, the total district score possible remained 13 points.

State subscore--Staff ratings of network functioning are the primary contributors to this score. Ratings for state network composition (IMPL item 88) and for composition of the network's coordinating council (IMPL item 89) were summed for up to 8 points. For staff ratings of regional coordinating council composition (IMPL item 90) the ratings of 3 and 4 were doubled for up to 8 points. The principal's information about whether the school belongs to a group of IGE schools outside the district (SCHOOLS item III B1), if answered "yes," was assigned one point. The initial state subscore, a sum of these three parts, thus ranged from 0 to 17.

For four additional items related to availability of IGE-related courses, staff responses were felt to be of potential value for this subscore. Information about courses for awareness, commitment, and changeover (IMPL item 91) and about courses in IGE refinement (IMPL item 92) was useful. The procedure for adding this information was the same as the procedure for adding information to the district subscore; that is, a proportion of the original 17 points and a proportion of the additional 8 points were added to provide a state subscore of up to 17 points.

Community subscore--Staff ratings of reporting procedures (IMPL item 75), evaluation of the home-school-community relations program (IMPL item 80), and school analyses of community attitudes (IMPL item 81) were summed for this score that ranges from 0 to 12.

Composite score--The three subscores were summed to obtain the IOR composite. In this way the district and community subscores each are approximately 30% of the total and the state subscore is about 40% of the total.

2--PROCEDURES FOSTERING COORDINATION AND IMPROVEMENT OF SCHOOL PROGRAM

Program coordination and improvement in the school is considered to result from the school's program of home-school-community relations, the facilitative environment within the school, and research and development activities. The composite score is a sum of subscores for each of these three elements. Scores were developed from responses to six questionnaires:

principal's response to IGE Schools Questionnaire (SCHOOLS, buff paper)

IIC group responses to Instructional Improvement Committee structure and function (IIC, buff cover)

grade 2 and grade 5 unit groups' responses to Instruction and Research Unit Structure and Function (UNIT, pp. 13-21 in Unit Staff Questionnaires booklet; grade 2 sample provided, white cover)

grade 2 and grade 5 teachers' individual responses to Role of the Staff Teacher (ROLE, pp. 3 and 4 in Unit Staff Questionnaires booklet)

all staff members' individual responses to Staff Background Information (STAFF, pp. 3-5 in General Staff Questionnaires booklet, blue cover)

all staff members' individual responses to IGE Implementation Survey (IMPL, pp. 7-12 in General Staff Questionnaires booklet)

Home-School-Community Relations subscore--All staff members' reports of the extent to which each teacher is a teacher-advisor (IMPL item 31), the relative effectiveness of the school's program for reporting to parents (IMPL item 76), the extent of recruitment of people, particularly volunteers, to work in the school (IMPL item 77), the extent of use of community resources in instruction (IMPL item 78), and the extent to which home-school visits are used (IMPL item 79) were averaged for up

to 4 points per item. Points were summed for a total of up to 20.

Within each of the grade 2 and grade 5 units, staff members reported their responsibility for assigned groups of students (ROLE, items 4-6); two points were given each teacher's report of any one of the three responsibilities and four points for two or three. Scores were averaged for each unit separately and then summed for up to 8 points.

Also averaged separately for each unit were teachers' reports of being the unit's resource person for parent contact (ROLE, item 17); two points were assigned for a report of this speciality in each unit for a total of up to 4 points.

The IIC group reported percentage of meeting time devoted to dealing with parents (IIC, item 23). Four points were given for a report of from 10% to 19% and one point for either 0-9% or 20-29%.

The maximum possible Home-School-Community Relations subscore is 36, the sum of the parts.

Facilitative Environments subscore--Only within-school aspects of the IGE component named Facilitative Environments contribute to this subscore; other aspects of that component contribute to the score for Interorganizational Relations.

All staff members reported the relative effectiveness of the IIC in coordinating the school's programs (IMPL item 32), whether an Instructional Materials Center has been established in the school (IMPL item 62) and how it is staffed (IMPL item 63), the cooperation in provision of materials among the units, the school's IIC and the district's SPC (IMPL item 84), the provision of noncredit staff development activities (IMPL item 85), staff participation in staff development activities (IMPL item 86), and provision of release time through IIC and SPC cooperation (IMPL item 87). For each item, the staff average of up to 4 points was calculated; the averages for the seven items were summed for up to 28 points.

Also related to staff development activities were all staff members' reports of attending workshops (STAFF items 17 and 18); each response of yes was given two points. School averages were calculated for each item separately and then summed for up to 4 points.

In each of the grade 2 and grade 5 units, the staff group described various aspects of aides' roles: how well responsibilities are defined, how wide the range of tasks is, whether the aide is evaluated, whether the aide attends unit meetings, whether the aide participates in unit inservice, and how busy the aide is (UNIT items 30, 31, 33-35, and 37 about paid aides and items 41, 42, 44-46, and 48 about volunteer aides). Each statement said to apply to at least some of either paid or volunteer aides in the unit was given one point; points were summed for each of the grade 2 and 5 units separately but the maximum for each unit was limited to four points. The units points were added for up to 8 points total.

The principal reported whether rotating the unit leader position was school policy (SCHOOLS item IID part 2, page 3) and, if so, how often rotation occurred (SCHOOLS item IID part 3, page 3). Four points were assigned if the school's policy was not to rotate the position; two points were assigned if rotation was policy but occurred less often than annually.

The principal also responded to questions about the school's Instructional Materials Center (SCHOOLS item IIF, page 3). Reports of a regularly staffed IMC, whether staff were fulltime or parttime, were assigned 4 points; reports of an IMC but no regular staff, 2 points.

IIC members as a group reported how often the IIC meetings and activities were evaluated (IIC item 21). Reports of frequent evaluation received 4 points; sometimes or continuously, 2 points.

The IIC group also reported percentage of meeting time devoted to arranging inservice for the whole staff (IIC item 25); 4 points were given for reports of from 10% to 19% and 2 points for either 0-9% or 20-29%.

The last question for the IIC group asked how many people worked on the questionnaire (IIC item 48). A report that more than one person participated received 4 points.

The maximum for within-school Facilitative Environments is the sum of up to 60 points for all parts--up to 32 points for responses from all staff, up to 8 points for use of aides in the two units, and up to 4 points for each of the five school-wide reports from the principal or IIC group.

Research and Development subscore--This subscore was developed from reports of all staff about the extent to which problem identification and solution are carried out (IMPL item 97), whether new curriculum materials are tested and evaluated in the school (IMPL item 98), whether innovative teaching techniques are developed and evaluated (IMPL item 99), and the extent to which external agencies participate in research and development in the school (IMPL item 100). Average scores, on the 0-4 scale used in responding, were calculated for each of the four items separately; the four averages were summed and divided by two, yielding a maximum of 8 points for this subscore.

Composite score--The program coordination and improvement composite is the sum of the three subscores. In this way Home-School-Community Relations contributes nearly 35%, Facilitative Enviroments nearly 58%, and Research and Development nearly 8%.

3--INTRA-ORGANIZATIONAL STRUCTURE

The composite intraorganizational structure score was calculated from four subscores: staff membership in I&R Units, student membership in I&R Units, the mechanics of unit meetings, and the mechanics of IIC meetings. Responses to five questionnaires contributed to the score:

principal's response to Spring 1977 Staff Roster (ROSTER, blue page)

principal's response to IGE Schools Questionnaire (SCHOOLS, buff paper)

IIC group's response to Instructional Improvement Committee Structure and Function (IIC, buff cover)

grade 2 and grade 5 unit groups' response to Instruction and Research Unit Structure and Function (UNIT, pp. 13-21 in Unit Staff Questionnaires booklet; grade 2 sample provided, white cover)

all staff members' individual responses to Staff Background Information (STAFF, pp. 3-5 in General Staff Questionnaires booklet, blue cover)

Staff Membership in I&R Units subscore--Staff reporting their positions as curriculum consultant, special education staff, unit leaders, or teachers (STAFF item 1) were considered to be instructional staff. Each of these people reported the proportion of time assigned to the building (STAFF item 2) and assignment within the school to a classroom, one unit, the whole school, etc. (STAFF item 3). The first part of the staff membership score was the proportion, in full time equivalents, of all instructional staff that are, if unit leaders or teachers, assigned to one unit and, if curriculum consultants or special education staff, assigned to one or more specific units or to the whole school. This proportion was multiplied by 10 for 10 possible points.

If one or more staff reported being principal (STAFF item 1 response 6) assigned full time to the building (STAFF item 2 response 5), one point was assigned.

For all staff who reported a specialty with instructional materials (STAFF item 1 response 2), the time assigned to the building (STAFF item 2) was summed to a maximum of 2 points.

The principal reported whether the school as a whole had aides (SCHOOLS item IIG, page 3). If the school had

either paid aides or volunteer aides, one point was assigned.

Two points were assigned if the principal reported that all units had unit leaders (SCHOOLS item IID part 1, page 3).

An index of the extent to which special staff of the school were a part of the IGE program was developed from the Spring 1977 Staff Roster completed by the principal and from staff members' reports of position in the school. Two points were assigned if over half of the special staff identified on the roster responded to questionnaires; one point if less than half; zero if none of the school's special staff participated.

The staff membership subscore has a maximum of 18 points as follows: up to 10 points for instructional staff assignment to units; 1 point for fulltime principal; 2 points for IMC staff; 1 point for aides; 2 points for unit leaders for all units; and up to 2 points for special staff participation.

Student Membership in I&R Units subscore--Average number of students per unit, or unit size, was calculated from the principal's report for each unit (SCHOOLS item IID, page 2). Nine points were assigned for units of 100-125 students, six points for 75-99 or 126-150, and three points for all others. Points for all units were summed and then divided by the number of units reported to obtain a school average of up to 9 points.

From the report of grade range of students in each unit (SCHOOLS item IIB, page 2), the proportion of multigraded units was calculated in the following way: each unit was assigned either 0 for a report of all students from a single grade, or 1 for a report of students from more than one grade; the scores were summed and divided by the number of units.

The student unit membership score is a sum of up to 12 points: up to 9 points for unit size, up to 1 point for multigraded units, and 2 points for inclusion of all other regular students.

Unit Meetings subscore--The unit staff groups at each of grades 2 and 5 reported whether they held regular unit meetings (UNIT item 4); for each unit a response of yes was assigned 1/2 point for a possible school total of 1 point.

The units reported both the number of hours scheduled for planning as a unit (UNIT item 1) and the actual number of hours spent in meetings each week (UNIT item 5). Meeting time reports of 1, 2, 3, or more hours were given 1, 2, or 3 points respectively. Release time reports of 1, 2, 3, or more hours were given .5, 1, or 1.5 points respectively; however, if actual meeting time was reported to be less than release time, the reported meeting time was used instead of the hours reported release time. Additional scheduled release time for individual planning was also reported (UNIT item 2); 1 point was assigned for any extra release time over one hour. The scores for each unit were summed separately and averaged for up to 5.5 planning/release time points. The average was doubled for up to 11 points for the school.

Staff positions of people attending unit meetings as permanent and regular members were also reported (UNIT items 7-9 and 11-15). For each response of yes, points were given in the following manner: unit leader, 2 points; unit teachers, 6 points; unit aides, principal, IMC staff, pupil personnel services staff, special education staff, and curriculum specialists, 1 point each. However, if unit teachers were said not to attend unit meetings on a permanent and regular basis, none of the possible 14 points were given. Scores for the two units were averaged for up to 14 membership points.

The maximum possible Unit Meetings subscore is the sum of 1 point for regular meetings, 11 points for planning/release time, and 14 points for staff membership, or 26 points.

IIC Meetings subscore--The IIC reported positions of people attending IIC meetings as permanent and regular members (IIC items 3-10). For each response of yes, points were assigned as follows: principal, 4 points; unit leaders, 4 points; IMC staff, curriculum specialists,

special education staff, and pupil personnel staff, 2 points each; regular staff teachers and parents, 1 point each. The maximum was limited to 14 points. However, if the principal or the unit leaders don't attend regularly or if the school does not have an IIC (IIC item 2), none of the 14 points were given. In addition to IIC reports of membership, all staff members reported whether they regularly attended IIC meetings (STAFF item 7); if more than 40% of the teachers reported regular attendance, suggesting that IIC meetings were used as staff meetings rather than program planning meetings, membership points reverted to zero.

The principal reported how often the IIC met (SCHOOLS item IIE part 2, page 3). Six points were assigned for weekly meetings; four points for twice a month; two points for once a month. Again, if the school did not have an IIC (IIC item 2), no points were assigned.

The IIC group reported the number of hours per month scheduled for regular meetings (IIC item 13); eight points were assigned if four or more hours were scheduled each month; six points for three hours; four points for two hours; and two points for one hour.

Reports from the IIC also indicated whether formal records were kept (IIC item 16) and whether copies were distributed (IIC item 17). One point was assigned if records were kept and an additional point if copies were distributed.

Thus, the IIC meetings subscore has 30 possible points: 14 for membership, 6 for frequency of meetings, 8 for time scheduled, and 2 for formal records.

Composite score--Total scores for Intraorganizational Structure were developed so that half of the total would result from unit membership subscores, 30% from unit meetings subscores, and 20% from IIC meetings subscores, with a total of 30 points. The following formula was used: Total = (.5) (Membership) + (.3) (Unit Meetings) (30/22) + (.2) (IIC Meetings) (30/31).

4--GENERAL IMPLEMENTATION OF THE INSTRUCTIONAL PROGRAMMING MODEL (IPM)

The composite IPM score is a sum of eight subscores, one for each of the seven steps of the Instructional Programming Model and one for schoolwide use of the IPM. Scores were developed from responses to five questionnaires:

principal's response to IGE Schools Questionnaire (SCHOOLS, buff paper)

all staff members' responses to IGE Implementation Survey (IMPL, pp. 7-12 in General Staff Questionnaires booklet, blue cover)

IIC group's responses to Instructional Improvement Committee Structure and Function (IIC, buff cover)

grade 2 and grade 5 teachers' individual responses to Role of the Staff Teacher (ROLE, pp. 3 and 4 in Unit Staff Questionnaires booklet)

Schoolwide Objectives and IIC Instructional support subscore--All staff members reported the extent to which the IIC formulates general objectives (IMPL item 42), identifies or provides for the identification of specific instructional objectives (IMPL item 43), and indicates the appropriate criterion and target students for each objective (IMPL item 44). Responses, ranging from 0 to 4, of all staff to all three items were averaged; the average was multiplied by 1.4 to give scores from 0 to 6 points.

Selecting Objectives in Unit subscore--All staff members reports of the extent to which each unit estimates objectives attainable by children in the unit (IMPL item 48) were averaged for up to 4 points. Two points were assigned for each of the two units in which at least one person reported specializing in the preparation of instructional objectives (ROLE item 15). Points were summed for a total of up to 8 and were multiplied by 2.25 for a maximum possible score of 18.

Record Keeping subscore--All staff members reported the extent to which the IIC identifies record-keeping forms and procedures (IMPL item 47) and staff of each unit uses available assessment results to determine each student's level of achievement and other characteristics (IMPL item 49). The averages of up to four points for each item were summed and multiplied by 2.25 for a maximum possible score of 18.

Setting Short-Term Objectives subscore--All staff members reports of the extent to which each unit sets short term objectives for individual students (IMPL item 50) were averaged for up to 4 points. For each of the two units in which at least one person reported specializing in grouping (ROLE item 14), 2 points were assigned. Points were summed for a total of up to 8 and were multiplied by 1.625 for a maximum possible score of 13.

Providing Instruction subscore--All staff members reported the extent to which the IIC coordinates identification of instructional materials and equipment (IMPL item 45), the extent to which each unit outlines instructional programming and each teacher participates in carrying out plans (IMPL item 51), the amount of attention given in planning to individual differences (IMPL item 52), the compatibility of available curriculum guides with the Instuctional Programming Model (IMPL item 56), the variety of media and materials available (IMPL item 57), and the extent to which materials are chosen to match student learning styles (IMPL item 60). For these six items, responses were averaged for up to 4 points each or 24 points total.

Each unit group reported, separately for paid and volunteer aides, the extent to which aides' tasks included instructional activities with children (UNIT items 32 and 43). One point was assigned for each report that some aides had instructional tasks; two points were assigned for each report that most or all aides had instructional tasks but the maximum was limited to 2 points for each unit group.

Each teacher in the grade 2 and grade 5 units reported being a resource person to the unit permanently for a particular subject matter area (ROLE item 9), for topics within a subject matter area (ROLE item 10), for teaching methods in small groups (ROLE item 13), or for procuring materials (ROLE item 16). For each unit two points were assigned for each of five resource-person roles reported by at least one teacher; points were summed for up to 10 points for each unit group.

The possible total of 48 points--24 from all staff responses, 4 from unit group responses about aides, and 20 from unit teachers about specialties--was multiplied by 0.271 for a maximum possible score of 13.

Assessing After Instruction subscore--All staff members reported the extent to which the IIC arranges for assessment procedures (IMPL item 46), each unit's evaluation of students' attainment of instructional objectives (IMPL item 54), and each unit's evaluation of the students' instructional programs (IMPL item 64). The averages of up to 4 points for each item were summed for up to 12 points. For each of the two units, two points were assigned if at least one staff member reported specializing in student assessment (ROLE item 11). All points were summed and the total of up to 16 points was multiplied by 0.8125 for a maximum possible score of 13 points.

Evaluating Results subscore--All staff reported the extent to which units used evaluation information in planning instructional activities (IMPL item 55), the use of feedback to individual students (IMPL item 65), the extent to which units carry out interim evaluation of each student's instructional program (IMPL item 67), and the extent to which the IIC evaluates all students' attainment of schoolwide objectives (IMPL item 71). For these four items responses were averaged for up to 4 points each or 16 points total. The IIC group reported percentage of meeting time devoted to monitoring and evaluation (IIC item 22). Reports of from 10% to 29% were assigned four points; reports of from 0% to 39%, two points; other reports, no points. The sum of up to 20 points--16 from

all staff responses and 4 from the IIC report--was multiplied by 0.3 for a maximum possible score of 6.

Schoolwide Use of the IPM subscore--The principal reported, separately for each unit, the curriculum areas in which the steps of the Instructional Programming Model were followed (SCHOOLS item IIG, page 2); for each of the seven listed areas, the proportion of units following the IPM was calculated for up to 7 points. The principal also reported whether any of the Individually Guided Motivation (IGM) procedures were used (SCHOOLS item V, page 4); 2 points were given for reported use of any one IGM procedure in the school and 4 points for two or more. The IIC group reported percentage of meeting time devoted to assisting units with instructional programming (IIC item 24); 4 points were given for reports of from 20% to 49% and 2 points for from 10% to 19%.

To the four possible points for IGM use and four points for IIC assistance were added 8/7 of the up to seven points for use of the IPM in curriculum areas. This sum of 16 points was multiplied by .8125 for a maximum possible score of 13.

Composite score--The total score for general implementation of the IPM is the sum of the eight subscores.

5--GENERAL STAFF BACKGROUND

The staff background score is derived from all staff members' responses to the Staff Background Information questionnaire (pp. 3-5 in General Staff Questionnaires booklet, blue cover).

Responses to questions about years of experience overall (item 20) and years of experience in an IGE school (item 22) were combined with points assigned as shown in the chart below. An additional two points were assigned staff members with other than one point who reported

providing IGE related instruction (item 19) for up to seven points.

Experience in IGE	Experience in Education		
	0-2 yrs	3-6 yrs	7 or more yrs
0 yrs	0	0	0
1-2 yrs	1	2	2
3-4 yrs	0	3	4
5 or more yrs	0	4	5

Of the remaining background items, three were found to be related to the experience score: level of professional preparation (item 10), years of experience in the district (item 21), and years of experience in the particular school (item 23). Responses to these three items were combined in a weighted sum of up to about eight points.

So that the maximum possible score would equal the experience score and be primarily composed of that score, 72% of the experience score and 28% of the three combined items were added for each staff member. The school score is an average of the individual staff members' scores.

6--BELIEF IN INDIVIDUAL DIFFERENCES

This score is the average of all staff members' responses to 18 items in Assumptions About Conditions of Schooling and in Assumptions About Learning and Knowledge (both in General Staff Questionnaires booklet, blue cover, pp. 17 and 18 and pp. 19-21). Responses to the following items were included: 51, 59, 61, 63-68, 84, 85, 88, 89, 93, 94, 105, 106, 108. In all cases, the number of points assigned was the item response (0,1,2,3,4).

SCHOOL'S DEMOGRAPHIC SETTING

This descriptive measure was developed from responses to item 1 of the Instructional Improvement Committee

Questionnaire (buff cover). Seven categories of size and type of community, the categories used by National Assessment of Educational Progress (NAEP) in its reporting, were scored to represent the order of differences from the median; that is, a score of 1 was assigned the demographic category in which students tested by NAEP had average scores farthest below the median and a score of 7 was assigned the category in which students had average scores farthest above the median. In NAEP testing this order of differences was the same for reading and for mathematics results for nine-year-olds; those students were the youngest of NAEP's sample groups and the closest to Phase I's second and fifth graders. Scores were assigned as follows: low metro, 1; extreme rural, 2; main big city, 3; small place, 4; medium city, 5; urban fringe, 6; and high metro, 7.

APPENDIX B

Score Development Procedures

for

Features of Instructional Practices

at the Unit Level

(Items 7-10 on the diagram)

NOTE ON SCORE DEVELOPMENT

Instructional Practices scores were developed separately for mathematics and reading for each of the grade 2 and grade 5 units. Scores for the mathematics area included only reports about instructional practices related to mathematics. Scores for reading included reports about both reading and language arts if information had been given about both areas. When both reading and language arts information was reported, reading scores for grade 2 were the sum of two-thirds times the points for reading and one-third times the points for language arts; scores for grade 5 were the sum of one-half the points for reading and one-half the points for language arts. When information was reported only about practices in the reading area, scores were developed entirely from points for reading.

7--UTILIZATION OF CURRICULUM RESOURCES

The composite score is a sum of scores for schoolwide instructional objectives and for materials in use in the units. Both subscores were calculated separately for reading and for mathematics. Scores were developed from responses to three questionnaires:

> principal's response to IGE Schools Questionnaire (SCHOOLS, buff paper)
>
> IIC group's response to Curriculum Objectives section of the Instructional Improvement Committee Questionnaire (IIC, pp. 5-7, buff cover)
>
> grade 2 and grade 5 staff teachers' individual responses to Materials/Media (MATERIALS, pp. 8-10 in Unit Staff Questionnaires booklet; grade 2 sample provided, white cover)

Curriculum Objectives subscore--Two beliefs are reflected in the development of this subscore. First, the school's instructional program is best served if schoolwide specific instructional objectives in any curriculum area are adapted rather than adopted from the source(s). Second, the way in which particular objectives will be identified and used in the development of instructional plans in any curriculum area will be most effective if the school staff has first hand knowledge of curriculum materials that are compatible with IGE's instructional programming model; such materials include statements of specific instructional objectives, record-keeping procedures, assessment devices, and suggested instructional activities for various group sizes and learning styles. The latter belief is reflected in attention to the school's use of the Wisconsin Design for Reading Skill Development (Design) and Developing Mathematical Processes (DMP), products developed at the Wisconsin R & D Center.

In mathematics, a score of zero was assigned for reports of no school-wide objectives (IIC item 30) and no use of DMP (SCHOOLS item V, page 4). A score of one was assigned for reports of objectives developed without

reference to a published curriculum (IIC items 30 and 39 response 3) and no use of DMP. A score of two was assigned for either of two reports: first, school-wide objectives adapted from published sources with input from school staff (IIC items 30, 39 and 41) and no use of DMP in the school; second, school-wide objectives taken directly from a published curriculum and use of DMP in the school. A score of three was assigned for reported school-wide objectives adapted from a published curriculum and use of DMP.

In the language arts section of the reading calculations, a zero was assigned for reports of no school-wide objectives (IIC item 29). If school-wide objectives were reported, the value assigned was one for objectives plus one for each report of adaptation from a published curriculum, adaptation from objectives books (or catalogs) and partial local development (IIC items 36-38). This procedure resulted in values ranging from zero to four; seventy-five percent of the obtained value was used so that the maximum value would be the same as that for mathematics.

In the reading section of the reading calculations, original values ranged from zero to four and were, as in the language arts section, reduced to seventy-five percent of the original to maintain a maximum value of three. Zero was assigned to reports of no school-wide objectives (IIC item 28) and no use of the Design (SCHOOLS item V, page 4). A value of one was assigned for either of two reports: first, school-wide objectives adapted from published sources with input from school staff (IIC items 28, 33, and 35) and no use of the Design; second, school-wide objectives directly from a published curriculum and use of the Word Attack component of the design at either grade or any other component at grade 5. Similarly, a value of three resulted from either of two reports: first, school-wide objectives either directly from a published curriculum or from other sources plus use of Word Attack and one other component of the Design; second, school-wide objectives adapted from a published curriculum and use of one Design component as just described. A value of four was assigned for a report of school-wide objectives adapted from a published curriculum and use of Word Attack and one other component of the Design.

Materials in Use subscore--In calculating this subscore, the same procedure was followed for all three subject areas. Each teacher reported the number of types of reading-writing materials, audiovisuals, manipulatives, and no media situations (MATERIALS items 40-44, 80-84, and 120-124) used in each curriculum area; number of points assigned was the response, with a maximum of three points allowed per item. Each teacher also reported the percentage of time each of the four kinds of material was in use (MATERIALS items 45-48, 85-88, and 125-128). The response value for each percentage was multiplied by the points for variety of each kind of material; the four products were summed. For example, a report of two types of reading/writing materials used for 55% of the learner's time (response 5), plus one type of audio-visual material for 15% (response 1), plus one type of manipulative for 20% (response 2), plus two types of no-media situations for 10% (response 1) would result in a score of (2x5) + (1x1) + (1x2) + (2x1) = 15. The unit's score was the average of all unit teachers' scores. Maximum possible number of points is 30.

Composite score--The objectives subscore was multiplied by 10 for up to 30 points. Subscores were summed for up to 60 points total.

8--INFORMATION ACQUISITION

The composite score is made up of subscores for skill and concept assessment, record-keeping for skill and concept assessment, and assessment of other learner characteristics. Scores were developed from grade 2 and grade 5 individual staff teachers' responses to Learner Assessment (ASSESSMENT, pp. 7 and 8 in Unit Staff Questionnaires booklet; grade 2 sample provided, white cover) and the grade 2 and grade 5 unit groups' responses to Record Keeping (RECORDS, page 18 in Unit Staff Questionnaires booklet).

Skill and Concept Assessment subscore--Each unit teacher indicated which types of assessments were used in determining learners' skills and concepts. Six types of

assessments were considered: pretests, internal tests, posttests, conferences, student products, and classroom observations (ASSESSMENT items 29-33, 35, 69-73, 75, 109-113, 115). For each curriculum area, a score of 1 was assigned for up to two types of assessment; 2 for three or four types; and 3 for five or six types.

Record Keeping subscore--The unit group reported whether individual records were maintained for achievement of specific instructional objectives (RECORDS items 49-51). For each curriculum area, a score of 3 was assigned if such records were kept.

Other Characteristics subscore--Each unit teacher reported how many types of assessments were used in determining learner interests, attitudes, motivation, constructive or creative abilities; interpersonal relating abilities; and learning style (ASSESSMENT items 36-39, 76-79, 116-119). For each learner characteristic in each curriculum area, one point was assigned if at least one type of assessment was used. Points were summed for each curriculum area with the maximum number of points limited to 2.

Composite score--For each curriculum area, the total score is a sum of the subscores up to 8 points total.

9--INDIVIDUALIZATION OF INSTRUCTIONAL DECISIONS

Subscores for unit meeting content and for conditions permitting individualized instructional decisions were summed for the composite score. The meetings subscore is the same for reading and for mathematics. Scores were developed from responses to three questionnaires:

> grade 2 and grade 5 unit groups' responses to Unit Function (UNIT, page 16 in Unit Staff Questionnaire booklet; grade 2 sample provided, white cover)

grade 2 and grade 5 unit groups' responses to Grouping/Regrouping (REGROUP, page 19 in Unit Staff Questionnaire booklet)

grade 2 and grade 5 staff teachers' individual responses to Rate/Program Structure (PROGRAM, page 6 in Unit Staff Questionnaires booklet)

Meetings subscore--If unit meetings were reported to be regularly scheduled (UNIT item 4), a score was assigned for the reported content of those meetings (UNIT items 22-26). If at least 50% of meeting time was spent planning for instruction, 1 point was assigned. For each of making arrangements, evaluation efforts, and unit inservice, if no more than 19% of meeting time was spent, 1 point was assigned. If no more than 9% of meeting time was spent for individual preparation, 1 point was assigned. Points were summed for up to 5 points.

Conditions subscore--The unit group reported how often regrouping occurs for instruction in each curriculum area (REGROUP items 56-58). Reports of regrouping every 2-3 weeks or monthly were assigned 4 points; and weekly or quarterly, 2 points. Each teacher reported the extent to which learners' rates of progress differed (PROGRAM items 21, 61, and 101). Reports that most or all learners differed in rate of progress were assigned 3 points; other reports were assigned 2, 1, or 0 points matching the response code. Each teacher also responded to questions about minimum requirements (PROGRAM items 23, 24, 63, 64, 103, 104). Reports that a learner could not leave the curriculum area without satisfying minimum requirememts and that there were minimum requirements for all learners were assigned 2 points.

Points were summed for up to 9 points.

Composite score--Subscores were summed for a composite score of up to 14 points.

10--MANAGEMENT OF GROUPING & INSTRUCTIONAL CONTINUITY

Six subscores were summed for the composite instructional management score. Scores were developed from responses to the following questionnaires in the Unit Staff Questionnaire booklet (grade 2 sample provided, white cover):

grade 2 and 5 unit groups' responses to
- Grouping/Regrouping (REGROUP, page 19)
- Time Allocation (TIME, page 20)
- Objectives (OBJECTIVES, page 21)

grade 2 and 5 staff teachers' individual responses to
- Rate/Program Structure (PROGRAM, pp. 6-7)
- Grouping (GROUP, page 11)

Grouping Conditions subscore--Each teacher reported the percentage of time learners spent in various kinds of learning groups; reports about four of the kinds of groups contributed to the score (GROUP items 52-55, 92-95, 132-135). Three points were assigned for each of the following reports: 30-89% of time in a group of 2-7 learners with one instructor; 30-89% of time in a group of 8-20 learners with one instructor; 0-19% in a group of 21-40 learners; and 0-9% in a group of over 40 learners. Scores were summed for up to 12 points.

Regrouping Practice subscore--The unit group reported typical practices in regrouping in two items for each subject area. For reports that the typical conditions are that teachers work with groups of changing composition and size (REGROUP items 53-55, response 3) and that learners join a new group of students (REGROUP items 59-61, responses 2 and 3), 12 points were assigned.

Perceived Sequence subscore--Each unit teacher reported how evident to learners the sequence of objectives is (PROGRAM items 26, 66, 106). At grade 2, reports of **sometimes**, **frequently**, or **almost always** were assigned 4 points. At grade 5, the latter two reports were assigned 4 points.

Perceived Interrelationship subscore--Each unit teacher reported how much the interrelationship of objectives is clear to learners (PROGRAM items 27, 67, 107). At grade 2, 4 points were assigned for reports of **sometimes, frequently, or almost always.** At grade 5, the latter two reports were assigned 4 points.

Maximum Annual Objectives subscore--The unit group reported the maximum number of objectives a child could attain in one school year (OBJECTIVES items 68-71). Reports of from 20 to 149 objectives were assigned 8 points.

Instructional Continuity subscore--Each teacher reported the extent to which learners feel that instruction is interrupted in a day (PROGRAM items 28, 68, 108). Reports that interruptions were perceived only **seldom** or **sometimes** were assigned 4 points. The unit group reported time blocks for scheduling instruction. Reports other than "several 5-15 minute time blocks during the day" were assigned 4 points. Teacher averages and the unit score were summed for up to 8 points.

Composite score--Subscores were summed for up to 48 points.

APPENDIX C

Score Development Procedures

for

Staff and Student Outcomes

11--TEACHER JOB SATISFACTION

A single score was developed for job satisfaction from the 50 items in the Job Satisfaction Survey (pp. 13-15 in General Staff Questionnaires booklet, blue cover).

For each item, a report of **satisfied, quite satisfied, or very satisfied** was assigned one point; other reports were assigned no points. Points were summed up to 50 for each staff member. The school score is the average of all scores and has a maximum of 50 points.

In the first school report, results for 157 schools were summarized on a 0-200 scale; points assigned for each item matched the response code which ranged from 0 to 4. For the 156 schools in the in-depth analysis, the correlation between the two scores is .94.

12--GRADES 2 AND 5 ACHIEVEMENT SCORES

Scores were developed separately for each achievement subtest and then summed for reading and mathematics total scores at each grade level. The achievement scores are difference scores, or regression residuals, relating children's obtained raw scores to the scores that would have been predicted in this test group based on academic aptitude and sex.

All tested children took the Short Form Test of Academic Aptitude (SFTAA). Raw scores for language ability and for nonlanguage ability were obtained from the SFTAA. The Comprehensive Tests of Basic Skills (CTBS) provided achievement scores. Except in very small instructional units, no child took all CTBS subtests. Thus, total reading and total mathematics scores had to be developed. The procedures are described below.

Four steps were followed separately for each achievement subtest. First, for all children who took each subtest, a regression equation was developed for predicting the subtest score from language ability raw score, nonlanguage ability raw score, and sex. Second,

the coefficients obtained in the first step were used to predict a raw score for each child who took the test. Third, each child's predicted raw score was subtracted from the actual raw score. Fourth, these difference scores were averaged for all children in the same instructional unit.

School total scores were obtained by summing the difference scores for subtests as follows:

Total Score	Subtests
grade 2 reading	vocabulary sentence comprehension passage comprehension
grade 2 mathematics	computation concepts and applications
grade 5 reading	vocabulary comprehension
grade 5 mathematics	computation concepts applications